
OTONOM
TEKNOLOJİ

Autonomous system technologies for a better world

Otonom Teknoloji is a tech company that develops innovative solutions in the field of unmanned systems. Having launched its operations in 2013, the companys stated mission is to ***Design and produce autonomous system technologies for a better world, and to gain vertical specialisation in this field,*** while its vision is ***to Become a leading company that plays a guiding role in autonomous system technologies.***

Otonom Teknoloji ***develops integrated solutions for a broad range of applications, including border security; intelligence, reconnaissance and surveillance; communications; search and rescue; and agriculture***. Foremost among these applications are aerostats, tethered unmanned aerial vehicles, and their associated electronic and software components.

After the launch of its very first product, the ***DORUK***, in 2014, Otonom Teknoloji has since developed further products such as the ***DOLUNAY, TEPEGÖZ, TETRON, MINISTEER and OTONOM GCS***. Otonom Teknoloji's products have seen active use in the field, and have proven themselves in different scenarios.

In line with its target of ensuring vertical specialisation, Otonom Teknoloji ***designs and produces all of its products in-house, relying on its competent staff, and rolling out tailor-made solutions.*** The company pays attention to the needs of its customers, analysing them with the special software tools it retains in its own library. Otonom Teknoloji boasts a vast library, large amounts of testing and trial data, and advanced algorithms related to unmanned aerial vehicles, ensuring optimal design parameters for all of its aerial vehicles.

Otonom Teknoloji's solutions can be scaled according to customer requirements to include a broad range of services, from the supply of aerial vehicles to leasing services, and the provision of integrated solutions consisting of sensors and command-control systems. It offers ***turnkey solutions*** for border security applications to requesting users, while also meeting demands such as leasing services.

OUR ACTIVITY AREAS

Otonom Teknoloji's areas of activity are listed as follows:

Aerostat and airship system design, production and system integration

- Custom designs according to customer requirements
- Special maintenance services in mission areas
- Operator services
- User training

Unmanned and autonomous system design, development and system integration

- Unmanned tethered balloon systems
- Balloon systems free-roaming at altitudes of 3,000 meters
- Tethered rotary-wing UAV systems
- Robotic systems for sensitive agricultural applications

Embedded system and software design and development

- Ground control software for unmanned systems
- DO178C-compatible software development and verification
- Mission critical software development and verification

Design and development of aviation products

- Hot air balloon subsystems
- Inflatable aviation products

Otonom Teknoloji retains a highly disciplined engineering workforce with significant experienced in the defence and aerospace sector, as well as a dedicated centre for design and management activities and a production facility designed for the creation of integrated system solutions. All engineering, maintenance and production services are conducted in accordance with the ISO 9001 quality management standard.

ANALYSIS CAPABILITIES

Otonom Teknoloji conducts internally all of necessary engineering analyses for its fields of activity:

- Computational fluid dynamics (CFD) analysis
- Thermal analysis
- Interpretive analysis
- Finite elements analysis (FEA)
- Atmosphere model analysis

2012

- Company Founded

2013

- Inauguration of METU TEKNOKENT Design Office
- Support by KOSGEB, TTGV and TEYDEB
- MINISTEER

2014

- Opening of the İvedik Industrial Zone production facility
- First flight of the DORUK aerostat system
- First flight test using the MINISTEER

2015

- First flight of the DOLUNAY spherical balloon system
- First flight of the TEPEGÖZ airship
- DORUK at 1,000 metre altitude
- First flight of the DORUK aerostat system aboard a navy ship

2016

- Inauguration of Bilkent Cyberpark Design Office
- First border surveillance mission of DOLUNAY
- Acoustic sensor integration onto the DORUK aerostat system
- Participation in the Efes International Military Exercise

2017

- Work on the Precision Agriculture Robot
- Aerostat-based communication solutions TETRON project
- D0178B/C avionic software projects

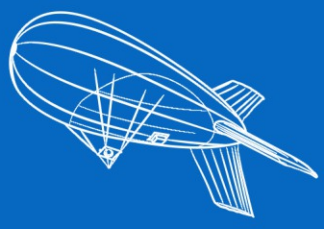
2018

- Hot air balloon studies
- DOLUNAY as a target UAV
- Partnership in Precision Agriculture

To contribute to a better world, we design and produce new technologies and systems in the field of autonomous system technologies.
We are always by your side with our innovative solutions.

A. Nezir Ertürk
General Manager and Founder of Otonom Teknoloji

Otonom Teknoloji Products



DORUK

An aerostat product family with a teardrop-shaped frame, capable of operating at high altitudes for long periods

DORUK is a reliable, robust and secure platform that is minimally affected by weather conditions, and which can serve at high altitudes for long periods. Capable of climbing to altitudes of up to 1,500 meters, the DORUK family of platforms can carry payloads of up to 500 kg, conducting their missions for periods of more than one week without interruption. The special form of its frame allows it work even in wind speeds of up to 40 Knots.

DOLUNAY

A portable and compact aerostat product family, boasting optimal mission-specific features

The spherical DOLUNAY family of portable aerostat platforms can be launched into service easily and rapidly by two operators in constrained areas. Easy to transport, it can carry payloads of up to 20 kg to an altitude of 500 meters. Owing to its pressure balancing systems, which its competitors lack, the DOLUNAY product family can execute its missions for long periods.

TETRON

A tethered UAV system with unlimited operation time and 100 percent communication security that can be utilised from platforms with limited volume, even when they are on the move or in confined areas.

The TETRON UAV system enables a rotary-wing unmanned aerial vehicle (UAV) to operate while tethered to a compact ground station via a cable. It can be integrated into different platforms with limited volume, including land and naval vehicles, and can be used even when the platform is on the move or in confined areas. As the TETRON transmits power via the cable, the operating time of the UAV is no longer limited by its battery, meaning that it can continue to operate as long as power continues to be supplied from the ground. Communication also takes place through the cable, preventing jamming or signal interception by others. The system can be integrated with different rotary-wing UAVs, according to the needs of the client.

TEPEGÖZ

An unmanned airship capable of operating uninterruptedly for one week at altitudes of 3,000 meters

TEPEGÖZ is an unmanned airship that is capable of operating uninterruptedly for long periods, offering effective and low-cost solutions for specific requirements. It can reach its destination using its own engines, and can produce and store energy during the day via its solar panels, relying on this stored energy to operate at night.

MINISTEER

A reliable, modular and high-performance electronic control unit that can be used on different autonomous and unmanned systems.

The MINISTEER boasts sufficient processing power to serve as an interface between different components and to fulfil different functions, all within a small-volume and low-weight unit with low power consumption. A single unit can perform a range of functions, such as navigation, communication, command and control, smart power management and signal processing.

OTONOM GCS

A reliable and high-performance ground-control station, capable of meeting every requirement.

Designed to be compatible with the JAUS architecture, the OTONOM GCS has, in addition to integrated platform control features, many other capabilities such as the control of numerous platforms from a single unit; the tracking of platform status; the generation and display of operator warnings; integrated payload control; map support; recording; and a customizable user interface.

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